

509, 031

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

27 SEP 2004

(43) International Publication Date
2 October 2003 (02.10.2003)

PCT

(10) International Publication Number
WO 03/080811 A1(51) International Patent Classification⁷: C12N 1/12

(21) International Application Number: PCT/KR03/00569

(22) International Filing Date: 24 March 2003 (24.03.2003)

(25) Filing Language: Korean

(26) Publication Language: English

(30) Priority Data:
10-2002-0016183 25 March 2002 (25.03.2002) KR(71) Applicant (for all designated States except US): **ES BIOTECH CO., LTD.** [KR/KR]; 531-18, Songjeong-ri, Byeongcheon-myeon, 330-860 Cheonan-si, Chungcheongnam-do (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HAN, Byung-Hoon** [KR/KR]; 609-1, Donam-dong, Seongbuk-gu, 136-060Seoul (KR). **PYO, Mi-Kyung** [KR/KR]; #402, Bangsan APT, 5-89, Myeongryun-dong 1-ga, Jongno-gu, 110-521 Seoul (KR). **YANG, Su-Jin** [KR/KR]; 198-27, Maetan2-dong, Paldal-gu, 442-801 Suwon-si, Gyeonggi-do (KR).(74) Agent: **PARK, Sa-Ryong**; Rm.301, Chongho Bldg.823-5, Yeoksam 1-dong, Kangnam-gu, Seoul 135-081 (KR).

(81) Designated States (national): CN, JP, US.

(84) Designated States (regional): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DENATURED SPIRULINA AND MANUFACTURING METHOD THEREOF

(57) Abstract: Disclosed is a denatured spirulina of being removed the unpleasant smell of spirulina, of maintaining its nutrients undestroyed, of being changed the unpleasant deep blue color from light blue to rose pink, and of showing higher suspensible nature to cold water, characterized in that spirulina is suspended in distilled or purified water to destroy its cell membranes by osmolytic treatment, so the chromoprotein phycocyanin leaks out of the cell membranes; chromoprotein in the spirulina is partially denatured by heating the resulting mixture; condensing, condensing under reduced pressure or finally freeze-dried the resulting mixture.

WO 03/080811 A1